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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,404	11/14/2001	Takeshi Kamio	SH-0027US	7029

21254 7590 04/19/2006

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EXAMINER
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HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/987,404

Applicant(s)

KAMIO ET AL.

Examiner

John Hoffmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-15 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 27 February 2006 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-8, 10-15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The "predetermined (range)" reads on a nebulous mental step conducted prior to the manipulative steps of the claimed process, hence rendering the present process claim unclear in meaning in scope. If applicant wishes to patent detail controls over the recited process, the process steps must be positively recited. See Seagram & Sons Inc. vs Marzall, 84 USPQ 180. In other words: it is unclear whether one can copy applicant's invention completely (without infringing) merely by using a determined range or any other range that is not "predetermined" – but is otherwise in the 0.5D-0.9D range.

Various dependent claims require that the range comprises other ranges. It is not understood what is meant by a range comprising a range. For example, claim 1 requires the 0.5-0.9 range to comprise the range (or could be considered a 'sub-range') of 0.6-0.8. But that is inherent. One cannot have the first range without the second range – thus it is unclear whether claim 3 is suppose to require that the (d) be within the sub-range. The claim only stipulates that (d) be in the first range. It is unclear whether it is proper to interpret claim 3 as requiring that (d) must also be within the sub-range. This issue may be even more complex with claims like claim 5 – which may permit one to avoid infringement by having a range that does not comprise the sub-range – i.e. the two ranges only overlap.

Claim 6: there is no antecedent basis for "said glass base material manufactured by sintering..." Whereas the preamble to claim 1 mentions glass base material, the body of the claim does not indicate any is made; thus the preamble does not appear to breathe life and meaning to the claims. Nevertheless, no sintering is elsewhere mentioned – thus it is unclear if such is required.

Claim 7: there is confusing antecedent basis for "said furnace" – it is unclear if it is the furnace of claim 1 or the furnace of claim 7. Or if there is not two furnaces.

Claim 13 – indicates that an eccentricity of a core becomes 0.4% or less. It is unclear whether it requires that there must be a core, and the becoming must occur – or whether it is merely a "capable of" becoming, or if it is to be read: if there is a core and it is not 0.4% or less, then it becomes 0.4% or less, or if it means something else

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completely. The language appears to be directed to another nebulous mental step which makes the meaning indefinite.

The term "determined" (at least claim 11) also makes claims indefinite because it is a nebulous mental step – not a manipulative step. It is unclear whether some mind-reading machine is needed to determine whether something was actually determined or not.

***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 1, and 3- 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa 5306322.

See how Ishikawa was previously applied. Also, as indicated in the Office action of 4/27/2005, Applicant admits that (d) cannot work if it is less than 0.5D. That means the inherent workable range is 0.5 D to 1.0 D (because d cannot be larger than D. Therefore, the 0.5-0.9 range does not define over the necessary workable range of 0.5-1.0.

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As indicated in MPEP: 2144.05 [R-1] Obviousness of Ranges

#### I. OVERLAP OF RANGES

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990) (The prior art taught carbon monoxide concentrations of "about 1-5%" while the claim was limited to "more than 5%." The court held that "about 1-5%" allowed for concentrations slightly above 5% thus the ranges overlapped.); *In re Geisler*, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997) (Claim reciting thickness of a protective layer as falling within a range of "50 to 100 Angstroms" considered prima facie obvious in view of prior art reference teaching that "for suitable protection, the thickness of the protective layer should be not less than about 10 nm [i.e., 100 Angstroms].") The court stated that "by stating that suitable protection is provided if the protective layer is about 100 Angstroms thick, [the prior art reference] directly teaches the use of a thickness within [applicant's] claimed range."). Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of "having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium" as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.). "[A] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness." *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003). However, if the reference's disclosed range is so broad as to encompass a very large number of possible distinct compositions, this might present a situation analogous to the obviousness of a species when the prior art broadly discloses a genus. *Id.* See also *In re Baird*, 16 F.3d 380, 29 USPQ2d 1550 (Fed. Cir. 1994); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); MPEP § 2144.08.

Alternatively: Examiner takes Official Notice that there are pre-existing ranges from 0 to "very large", for example 0-20 feet, 0-100 km, and 0-186,000 miles. Each of those ranges "comprises" all of the (sub)ranges that applicant claims and discloses. In other words: Applicant sets forth that "said predetermined range...comprises" a (sub)range of .5-.9. As indicated in MPEP 2111.03 the term "comprises" is open ended and does not exclude other members. In other words: the "predetermined range" does

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not exclude other values or subranges, such as 50km-100km. As indicated by claims 3 and 5 (and others) applicant clearly does NOT intend the "range" to be limited to the 0.5-0.9 (sub) range – the range can have other sub-ranges in addition.

Claims 8, 10-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa 5306322 in view of Antos 6289698.

See how Ishikawa is applied above and in the prior Office Action.

### ***Response to Arguments***

Applicant's arguments filed 26 January 2006 have been fully considered but they are not persuasive.

Applicant is correct in stating that the claim limitation of  $d < 0.9 D$  excludes the 0.93 D value of Ishikawa. Nevertheless, such is still obvious for the reasons of record. More importantly, as indicated above: the claim does not require (d) to be within the 0.5 – 0.9 range. Rather (d) must only be within ANY range that comprises the (sub) range of 0.5D-0.9D.

It is argued that Examiner has not alleged that the inventor merely discovered optimum or workable ranges. Examiner disagrees – see the above rejection. Examiner apologizes if such was not explained clearly previously.

Applicant alleges unexpected results, but no evidence is offered to support this assertion. It is noted that 37 CFR 1.132 reads: "When any claim of an application or a patent under reexamination is rejected or objected to, any evidence submitted to



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traverse the rejection or objection on a basis not otherwise provided for must be by way of an oath or declaration under this section.” Thus Applicant's arguments are not considered evidence – as far as Examiner can tell.

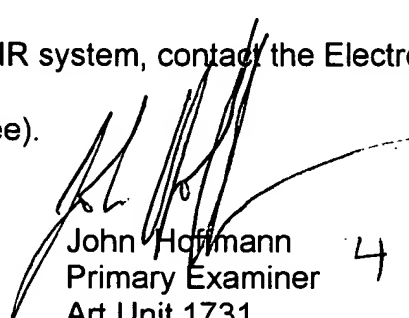
In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Thus it does not matter that Antos does not teach the ranges as applicant argues.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Hoffmann  
Primary Examiner  
Art Unit 1731

4-13-06

jmh